

IN THE CLAIMS

This listing of claims replaces all prior versions, and listings, in this application.

1. (withdrawn-currently amended) A process ~~Process~~ for [[the]] production of a food product comprising ~~involving~~ at least one heating step, ~~comprising and~~ adding one or more enzymes to an intermediate form of said food product in said production process; whereby the enzyme is added prior to said heating step in an amount that is effective in reducing the level of amino acids that are present in said intermediate form of said food product which amino acids are involved in the formation of acrylamide during said heating step.
2. (withdrawn-currently amended) The process ~~Process~~ according to claim 1, wherein the food product is made from at least one plant raw material.
3. (withdrawn-currently amended) The process ~~Process~~ according to claim 2, wherein the plant raw material is cereal flour, ~~preferably wheat flour~~ or potato.
4. (withdrawn-currently amended) The process ~~Process~~ according to claim 1, wherein the enzyme modifies a ~~is capable of modifying the~~ side chain of amino acids that are involved in the formation of acrylamide during the heating step of the production process and whereby the degradation products of said amino acids are not, or at least to a lesser extent, giving rise to the formation of acrylamide in comparison with the unmodified form of the amino acid.
5. (withdrawn-currently amended) The process ~~Process~~ according to claim 4, wherein the enzyme is modifying the side chain of at least one ~~of the~~ amino acid[[s]] selected from the group consisting of asparagine, glutamine, cystein, methionine, proline, serine, phenylalanine, tyrosine and [[/or]] tryptophane.

6. (withdrawn-currently amended) ~~The process~~ Process-according to claim 1, wherein the enzyme is added as an enzyme preparation or produced in situ by a microorganism ~~capable of producing said enzyme.~~

7. (withdrawn-currently amended) ~~The process~~ Process-according to claim 1, wherein the enzyme preparation is derived from a microorganism.

8. (withdrawn-currently amended) ~~The process~~ Process-according to claim 7, wherein the microorganism is a bacterium, a fungus or a yeast.

9. (withdrawn-currently amended) ~~The process~~ Process-according to claim 1, wherein the enzyme is asparaginase (EC 3.5.1.1) or glutaminase (EC 3.4.1.2).

Claims 10-21 (canceled)

22. (currently amended) An isolated asparaginase with an amino acid sequence which is at least 90% ~~[[80%]]~~ identical to SEQ ID NO: 3.

23. (currently amended) The ~~[[An]]~~ isolated asparaginase according to claim 22 obtained ~~obtainable~~ from *Aspergillus niger*.

24. (currently amended) An isolated asparaginase obtained ~~obtainable~~ by expressing a polynucleotide which hybridizes under high stringency conditions to the complement of SEQ ID NO: 1 or SEQ ID NO: 2, wherein high stringency conditions are hybridization in 5x sodium chloride/sodium citrate (SSC) at 68°C, 5x Denhardt's solution, and 1.0% sodium dodecyl sulfate (SDS); ~~according to claim 11~~ or a vector comprising the ~~nucleotide sequence of said polynucleotide~~ in an appropriate host cell.

25. (currently amended) A recombinant ~~Recombinant~~-asparaginase comprising an enzymatically active fragment of a functional domain of any of the asparaginase according to claim 22.

26. (withdrawn-currently amended) A method for manufacturing an asparaginase with an amino acid sequence which is at least 90% ~~[[80%]]~~ identical to SEQ ID NO: 3 comprising: ~~[[-]]~~

- (a) transforming a ~~suitable~~ host cell with ~~the an isolated~~ polynucleotide according to claim 24 ~~[[10]]~~ or a vector comprising ~~the nucleotide sequence of said~~ polynucleotide,
- (b) culturing said cell under conditions allowing expression of said polynucleotide, and
- (c) optionally purifying the encoded polypeptide from said cell or culture medium.

Claim 27 (canceled)

28. (withdrawn) A recombinant host cell expressing a polypeptide according to claim 22.

29. (withdrawn) A method of producing a food product comprising incorporating into the food product an asparaginase according to claim 22.

Claims 30-31 (canceled)

32. (currently amended) The ~~[[An]]~~ isolated asparaginase according to claim 24, wherein the host cell is *Aspergillus niger*.

33. (currently amended) The ~~[[An]]~~ isolated asparaginase according to claim 22, wherein the amino acid sequence comprises ~~is at least 90% identical to~~ SEQ ID NO: 3.

34. (currently amended) The ~~[[An]]~~ isolated asparaginase according to claim 22, wherein the amino acid sequence is at least 95% identical to SEQ ID NO: 3 and the asparaginase has asparaginase activity.

35. (withdrawn-currently amended) The [[A]] method for manufacturing an asparaginase according to claim 26, wherein the amino acid sequence comprises ~~is at least 90% identical to~~ SEQ ID NO: 3.

36. (withdrawn-currently amended) The [[A]] method for manufacturing an asparaginase according to claim 26, wherein the amino acid sequence is at least 95% identical to SEQ ID NO: 3 and the asparaginase has asparaginase activity.

37. (new) The process according to claim 2, wherein the plant raw material is wheat flour.

38. (new) The process according to claim 1, wherein the enzyme is an asparaginase having an amino acid sequence which is at least 95% identical to SEQ ID NO: 3 and retains asparaginase activity.

39. (new) The process according to claim 1, wherein the enzyme is an asparaginase obtained by expressing a polynucleotide which hybridizes under high stringency conditions to the complement of SEQ ID NO: 1 or SEQ ID NO: 2, wherein high stringency conditions are hybridization in 5x sodium chloride/sodium citrate (SSC) at 68°C, 5x Denhardt's solution, and 1.0% sodium dodecyl sulfate (SDS); or a vector comprising said polynucleotide in an appropriate host cell.

40. (new) A recombinant asparaginase comprising an enzymatically active fragment of the asparaginase according to claim 24.